4. Specification

4-1. General Specification

Display	3½ LCD 0.71" height,max. reading of 1999 with annunciators.
Polarity	Automatic "-" is displayed.
Overrange Indication	'OL' on LCD is displayed.
Low Battery Indication	' ' sign on LCD readout.
Auto Power off	Approx. 30 minutes.
Operation Temperature	0℃ to 50℃ less than 80% relative humidity up to 35℃ less than 70% relative humidity from 35℃ to 50℃
Storage Temperature	-15℃ to 50℃
Temperature Coefficient	0℃ to 18℃ and 28℃ to 50℃ less than 0.1×applicable accuracy specification per ℃
Power	9V Alkaline or Carbon Zinc battery (NEDA 1604)
Battery Life(typical)	100 hours with carbon zinc cells 200 hours with alkaline cells.
Dimension	90(W)×190(L)×35(H)m/m
Weight	Approx. 320 g
Accessories	Safety Test Lead 1 pair Operator's Manual 1 pc.

4-2. Measurement Specification

Accuracy of specifications apply for 1 year after purchase when operated in a temperature of 18℃ to 28℃ (64°F to 82°F) and a relative humidity less than 75%.
Basic electrical specifications are given as ±([% of reading]+ [number of least significant digits])

DC Voltage

Range	Resolution	Accuracy	Maximum Input
200mV	100 μV	±(0.25%of rdg+2dgt)	
2V	1mV	±(0.5 %of rdg+2dgt)	
20V	10mV	〃	DC 1000V
200V	100mV	〃	or PEAK AC
1000V	1V	±(0.5 %of rdg+2dgt)	

NORMAL MODE REJECTION RATIO : greater than 46dB at 50Hz, 60Hz(1K unbalance)

Overload Protection : 1100V DC or peak AC for 50 seconds.

AC Voltage

Range	Resolution	Accuracy	Maximum Input
200mV	100 μV	±(1.0% of rdg+4dgt)	
2V	1mV	〃	
20V	10mV	〃	AC 750V max.
200V	100mV	〃	50Hz-400Hz
750V	1V	±(1.5% of rdg+5dgt)	

Resistance

Range	Resolution	Accuracy	Input Protection
200Ω	0.1Ω	±(0.8% of rdg+4dgt)	
2KΩ	1Ω	〃	
20KΩ	10Ω	〃	Protected by
200KΩ	100Ω	〃	PTC
2MΩ	1KΩ	±(1.5% of rdg+5dgt)	(500V rms)
20MΩ	10KΩ	±(2.0% of rdg+10dgt)	
200MΩ	100KΩ	±((5%-10) of rdg+10dgt)	
2000MΩ	1MΩ	〃	

DC Current

Range	Resolution	Accuracy	Input Protection
200 μA	100nA	±(0.8% of rdg+4dgt)	
2mA	1 μA	〃	Protected by
20mA	10 μA	〃	2A/250V
200mA	100 μA	±(1.0% of rdg+3dgt)	Fuse
2A	1mA	±(1.2% of rdg+3dgt)	
10A	10mA	±(1.5% of rdg+3dgt)	10A/250V Fuse

Maximum Measuring Voltage Drop : less than 300mV

AC Current

Range	Resolution	Accuracy	Input Protection
200 μA	100nA	±(1.2% of rdg+3dgt)	
2mA	1 μA	〃	Protected by
20mA	10 μA	〃	2A/250V
200mA	100 μA	±(1.5% of rdg+5dgt)	Fuse
2A	1mA	〃	
10A	10mA	±(2.0% of rdg+5dgt)	10A/250V Fuse

Maximum Measuring Voltage Drop : less than 300mV

Frequency

Range	Resolution	Accuracy	Input Level
2KHz	1Hz	±(0.25% of rdg+2dgt)	Maximum Input
20KHz	10Hz	〃	Level:500V rms
200KHz	100Hz	〃	
2MHz	1KHz	〃	
20MHz	10KHz	〃	

Input Sensitivity : 2K Hz to 2M Hz-200mV rms(TTL only)
20M Hz -500mV rms(TTL only)

Min. Pulse Width : < 25ns

Capacitance

Range	Resolution	Accuracy	Test Voltage & Frequency
2nF	1pF	±(3.0%of rdg+3dgt)	Test Frequnecy 400Hz±3.0%
20nF	10pF	〃	Test Voltage 120mV
200nF	100pF	〃	
2 μF	1nF	〃	
20 μF	10nF	〃	

TR hFE

Range	Test Condition	Base Current
NPN	10μA DC	@3.0V DC
PNP	〃	〃

Continuity Test

Range	Threshold	Continuity beeper	Response Time
•))	30Ω	2.5KHz	< 100ms

DIODE TEST

Measures forward resistance of a semiconductor junction in K Ohm at max. test current of 1.5mA.

Logic Test

Type	Threshold	Frequency Response	Detectable Pulse Width
TTL	Logic 1; 2.5V±0.8V Logic 0; 0.8V±0.5V	20M Hz	25ns, min.
CMOS	Logic 1; 4.0V±1.0V Logic 0; 2.0V±0.5V	20M Hz	25ns, min.

5. Operation

5-1. Preparation and Caution before measurement

1. Function switch should be set to the range to be measured before operation.
   If the function must be switched during a measurement, always remove the test leads from the circuit being measured.
2. If the unit is used near noise generated equipment, be aware that the display may become unstable or indicate large errors.
3. Avoid using the unit in places with rapid temperature variations.
4. In order to prevent damage or injury to the unit, never fail to keep the maximum tolerable voltage and current, especially for the 10A current range.
5. Carefully inspect test lead. If damaged, discard and replace.
6. In order to avoid wrong range selection, be sure to check annunciator on the display.

5-2. Front Panel Description

1. Liquid Crystal Display
2. DC/AC Selector Switch
3. Peak Hold Switch
4. Data Hold Switch
5. Function/Rotary Switch
6. Capacitor Test Socket
7. TR hFE Test Socket
8. 10A input jack
9. mA · 2A input jack
10. Common input jack
11. V.Ω.Frequency input jack
12. Holster (OPTION)